

This listing of claims will replace all prior versions, and listings of claims in the application:

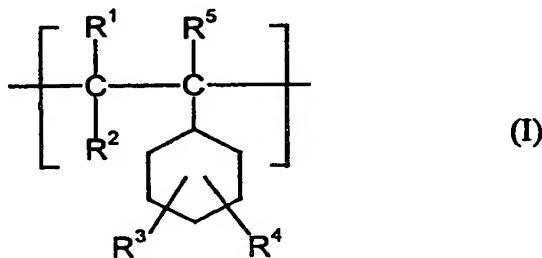
Listing of Claims:

Claims 1-8: (Cancelled).

Claim 9. (New) A composition comprising polymers of vinylcyclohexane with an absolute weight average molecular weight M_w from 100,000 to 450,000 g/mol, a molecular weight distribution characterized by a polydispersity index of from 1 to 3 and a maximum melt viscosity of 1000 Pa.s, as measured at 300°C and at a shear rate of 1000 sec⁻¹, wherein the vinylcyclohexane moieties result from the hydrogenation of aromatic units such that the hydrogenation rate of the aromatic units is from 99% to 100%.

Claim 10. (New) The composition of Claim 9 further comprising a low molecular weight component based on vinylcyclohexane with an absolute weight average molecular weight from 1000 to less than 100,000 g/mol,

Claim 11. (New) The composition of Claim 9, wherein the polymers contain, as a vinylcyclohexane-based polymer, a polymer comprising a recurring structural unit of formula (I)



wherein

R¹ and R², independently of each other, denote hydrogen or a C₁-C₆ alkyl,
R³ and R⁴, independently of each other, denote hydrogen or a C₁-C₆ alkyl, or jointly represent an alkylene,

R^5 represents hydrogen or a C_1 - C_6 alkyl, and optionally containing at least one comonomer selected from the group consisting of olefins containing 2 to 10 carbon atoms, C_1 - C_4 alkyl esters of acrylic acid, C_1 - C_4 alkyl esters of methacrylic acid, unsaturated cycloaliphatic hydrocarbons, tetracyclodecenes which are optionally substituted, divinylbenzene, vinyl esters, vinyl acids, vinyl actates and vinyl cyanides.

Claim 12. (New) The composition of Claim 9, wherein the polymers exist as homopolymers, copolymers or block copolymers.

Claim 13. (New) The composition of Claim 10, wherein in the proportion of low molecular weight component with respect to the weight of the mixture of high and low molecular weight polymers amounts to up to 70 % by weight.

Claim 14. Moldings comprising the composition according to Claim 9.

Claim 15. An optical substrate containing polymers according to Claim 9.